

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Examine the Commission's Future Energy Efficiency Policies, Administration, and Programs.

Rulemaking 06-04-010

ASSIGNED COMMISSIONER'S RULING ON PROCESS RELATED TO THE CONSIDERATION OF EMBEDDED ENERGY SAVINGS RELATED TO WATER EFFICIENCY

Parties interested in issues related to the energy savings resulting from successful water conservation efforts participated in a workshop held in Downey, California on July 17, 2006. The participants discussed specific policy questions set forth in Attachment 1 to the scoping ruling that I issued in this docket on May 24, 2006. Armed with the results of the workshop, parties filed opening comments by July 31, 2006, and reply comments by August 18, 2006.

Commenting parties agreed that (1) by saving water or developing and treating it more efficiently, it is possible to produce significant energy savings, (2) energy efficiency programs could be more effective if the electric and gas utilities were to promote water efficiency improvements that would provide cost-effective energy savings, and (3) there is a shared sense of urgency to begin accounting for this energy savings potential and incorporating it into the design of the energy efficiency programs.

Parties described two types of energy savings: cold water savings (related to the production, transportation and treatment of water) and hot water savings (those related to reducing the use of energy to heat water). It is the former (sometimes referred to as "upstream" savings) that comprise the embedded

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savings opportunity we are addressing in this portion of the proceeding.¹ The commenting parties identify four ways to reduce net energy consumption related to water use by capturing embedded, or "upstream savings."

- 1. Conserve water
- 2. Use less energy-intensive water (gravity-fed or recycling versus groundwater, aqueducts or desalination)
- 3. Make current delivery and treatment systems more efficient
- 4. Produce more energy through water delivery and treatment

Although any of these methods would reduce the net consumption of energy related to water use, the first three appear to be most consistent with an energy efficiency strategy.

While it is clear to all participants that the Commission should encourage a strategic integration of water and energy efficiency efforts, there is less certainty as to what changes the utilities can or should incorporate in the current (2006-2008) program cycle. There is a debate as to whether counting embedded energy savings related to water conservation now would produce real new benefits or simply give credit for savings that would have occurred anyway.

Another matter of considerable discussion is that the amount of energy needed to produce, convey, and treat water differs dramatically from place-to-place. For example, the San Francisco waterworks are often considered to be net energy producers because the water is largely conveyed by gravity and the main dam system (Hetch Hetchy) includes hydroelectric generators. By contrast, many communities along the California aqueduct are dependent on pumps to deliver water. Groundwater pumping consumes a lot of energy, while water

¹ We use the term "upstream" loosely, here, since it includes energy use related to post-consumption water treatment, which is clearly a "downstream" activity.

recycling consumes less. Desalination plants are highly energy-intensive because of the need to force water through a series of filters. A further level of complexity relates to the fact that pumped water often moves through more than one energy utility service territory. If a utility near the end-users spends money to reduce water use, some or all of the benefits may accrue to customers in the service territory of an upstream utility.

Most parties encourage the Commission to approve some type of pilot program for implementation during this program cycle to explore the potential for future programs to capture water-related embedded energy savings. In order to improve the likelihood of implementing new programs in the near future, I direct the utilities to submit applications for the approval of pilot programs as described in the ruling, below.

IT IS RULED that:

- 1. No later than January 15, 2007, Pacific Gas & Electric Company, San Diego Gas and Electric Company, Southern California Edison Company, and Southern California Gas Company shall file applications seeking approval of one-year pilot programs, as described below, to begin July 1, 2007.
- 2. Each utility should form a partnership with one large water provider to implement a jointly-funded program designed to maximize embedded energy savings per dollar of program cost. I encourage the utilities to work with municipal water utilities to the extent that they appear to be the most promising partners.
- 3. Funding for these programs would be separate from the funding established for 2006-2008 programs. I encourage the utilities to work together to develop a common program and funding approach, and suggest that they propose limiting the statewide energy utility cost for these pilot programs to approximately \$10 million.

4. While it would be important to count embedded energy savings related to

this effort, and to calculate any such savings related to existing programs, the

utilities should not seek credit for these savings as part of any rewards or

penalties related to the 2006-2008 period. The applications should include

proposals for counting the savings for the purpose of understanding program

benefits, rather than to affect rewards or penalties.

5. The utilities shall schedule a planning workshop during the second quarter

of 2007 to determine what needs to be done to prepare for full incorporation of

water-related programs during the 2009-2011 planning period. This workshop

should address a methodology to estimate the magnitude of savings along

various localities (and review California Energy Commission proxies);

evaluation, measurement and verification; procedural guidelines; outreach; and

training.

Dated October 16, 2006, at San Francisco, California.

/s/ DIAN M. GRUENEICH

Dian M. Grueneich, Commissioner

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I have provided notification of filing to the electronic mail addresses on the attached service list.

Upon confirmation of this document's acceptance for filing, I will cause a copy of the filed document to be served upon the service list to this proceeding by U.S. mail. The service list I will use to serve the copy of the filed document is current as of today's date.

Dated October 16, 2006, at San Francisco, California.

/s/ ERLINDA PULMANO
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